

Using Non Void Methods

Discussion:

Methods are a useful tool in programming because they allow us to provide intuitive behaviors to objects, allow users access to object attributes, and reduce the amount of code that needs to be written. Methods oftentimes have a **return** value, which is a value that is returned to the program to be used or stored in other variables and processes. Methods that have the keyword **void** do not return a value, while methods with a type, such as *String* or *Rectangle* indicate what type of value is being returned. For example, we know that the method `public int mystery` will return an `int` value, as the return type is `int`.

Exercise:

1. What value type will be returned for the following methods?

```
public Rectangle getRect()
```

```
public void printName()
```

```
public String addLetter()
```

2. Consider the following method:

```
public int doubleSize(int x)
{
    y = x * 2;
    return y;
}
```

Determine the value of the variable `mystery` in the following programming sequences:

a. `int mystery = doubleSize(14);`

b. `int mystery = 20;`
`doubleSize(mystery);`

c. `int mystery = 15;`
`mystery = doubleSize(mystery);`

3. The Calculator class is in need of a couple of methods. Write the following methods to provide the Calculator class with the appropriate behaviors:

a. The remainder method. This takes two integers, x and y , and returns the remainder of x from y .

b. The square method. This takes one parameter and returns the result of x to the 2nd power.

c. The printSum method. This takes two parameters, x and y , and prints the result of their sum.